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10/035,025	12/28/2001	Vladimir V. Protopopov	10544/169	9200

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BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60611

EXAMINER
GEMMELL, ELIZABETH M

ART UNIT	PAPER NUMBER
2882	

DATE MAILED: 02/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/035,025	Applicant(s) PROTOPOPOV, VLADIMIR V.	
	Examiner Beth Gemmell	Art Unit 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 December 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17 and 19-23* is/are rejected.

7)☒ Claim(s) *18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Double Patenting

Claims 1-7 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4,7-9 and 19-22 of copending Application No. 09/797498. Although the conflicting claims are not identical, they are not patentably distinct from each other because all the elements in the instant claims are found in the claims of the co-pending application (i.e. the co-pending claims are broader).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-7 are directed to the same invention as that of claims 1-4, 7-9 and 19-22 of commonly assigned application 09/797,498. The issue of priority under 35 U.S.C. 102(g) and possibly 35 U.S.C. 102(f) of this single invention must be resolved.

Since the U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302), the assignee is required to state which entity is the prior inventor of the conflicting subject matter. A terminal disclaimer has no effect in this situation since the basis for refusing more than one patent is priority of invention under 35 U.S.C. 102(f) or (g) and not an extension of monopoly.

Failure to comply with this requirement will result in a holding of abandonment of this application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4,14 and 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Chapman et al (US Patent 5,987,095).

Re claims 1 and 19: Chapman et al. discloses, in figure 1 and throughout the discloser, an imaging system comprising: a radiation generator that generates a beam of radiation along a first direction (16); an object that receives the beam of radiation, wherein a first portion of the beam of radiation is transmitted through the object along the first direction and a second portion of the beam of radiation is refracted along a second direction (25); an analyzer that receives the first and second portions of the beam of radiation, the analyzer suppresses the intensity of the first portion of the beam and transmits the second portion (30); a detector system that receives from the analyzer the suppressed first portion of the beam of radiation and the transmitted second portion of the beam and generates an image of the object (40).

Re claims 2-4,14 and 20-22: Chapman et al. discloses, in column 3 lines 11+, the beam being of x-ray radiation and radiating a parallel beam of radiation operating in point projection mode.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman et al. in view of Momose (US Patent 5,881,126).

Chapman et al. fails to disclose a radiation generator comprising a monochromator that receives the beam of x-rays from the x-ray source and generates a parallel beam of x-rays.

Momose discloses a radiation generator comprising a monochromator that receives the beam of x-rays from the x-ray source and generates a parallel beam of x-rays (column 8, lines 66+).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the system disclosed by Chapman et al. with that of Momose in order to produce more intense x-rays which in turn produces a clear image.

Claims 6-9,15-17,23,24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman et al.

Re claims 6: Chapman et al. fails to disclose the x-ray source working in linear projection mode.

Since Chapman et al. discloses the use of point projection mode, one of ordinary skill in the art at the time the invention was made would recognize that linear and point projection modes are well known equivalents in the art and the limitation of linear projection mode is absent of showing any criticality.

Re claim 7: Chapman et al. fails to disclose the object being smaller than the beam of radiation.

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the system disclosed by Chapman with a beam of radiation larger than the object, because by using a larger beam, only one scan is necessary to produce an entire image of the object. Therefore, the amount of extraneous radiation the object is subjected to is reduced.

Re claims 8 and 9: Chapman et al. fails to disclose the use of a multilayer mirror.

Since Chapman et al. discloses the use of a crystal analyzer, one of ordinary skill in the art at the time the invention was made would recognize that a multilayer mirror and a crystal analyzer are well known equivalents in the art and the limitation of the multilayer mirror is absent of showing any criticality.

Re claim 15: Chapman et al. discloses the object moving relative to the detector system (column 5, lines 3+).

Re claim 16: Chapman et al. discloses a detector comprising a column of sensitive elements (column 4, lines 58+).

Re claims 17 and 25: Chapman et al. discloses signals from the column sensitive elements are averaged to obtain an image signal (column 5, lines 27+).

Re claim 23: Chapman et al. discloses the object does not move during the generating of the image (column 5, lines 11+).

Re claim 24: Chapman et al. fails to disclose the object moving during the generation of the image.

One of ordinary skill in the art at the time the invention was made would have recognized the method of moving the object during the generation of the image as a well known method of imaging in the art and therefore the limitation of moving the object during the generation of the image is absent of showing any criticality.

Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman et al. in view of Seely et al.

Chapman et al. fails to disclose a multilayer mirror comprising alternating layers of materials of tungsten and boron-carbon wherein the thickness of the alternating layers are varied so as to suppress the intensity of the first portion of the x-ray beam.

Seely et al. discloses, in figure 6 and throughout the discloser, a multilayer mirror comprising alternating layers of materials (160 and 150) of tungsten and boron-carbon (column 4, lines 65+) wherein the thickness of the alternating layers are varied so as to suppress the intensity of the first portion of the x-ray beam (column 5, lines 18+).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the system disclosed by Chapman et al. with that of Seely et al. because high intensity radiation is better reflected and the amount of damage to the mirror is reduced.

Allowable Subject Matter

Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The best prior art of record fail to disclose the equation disclosed in the instant claim for generating the image.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beth Gemmell whose telephone number is (703) 305-1937. The examiner can normally be reached on Monday-Thursday 6:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

emg
January 24, 2003